

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 - 33 (Canceled)

34. (*New*) A generator for an engine comprising a flywheel configured so that a mass of rotatable magnets and magnetic steel material associated with the flywheel provide rotational inertia and function as a permanent magnetic rotor function to constitute a unitary flywheel-alternator fan assembly for alternator power generation, wherein an inner portion of the flywheel constitutes the only structural member connecting the rotatable magnets and associated magnetic material with the engine crankshaft, said inner portion also functions as a cooling fan or blower to create the necessary air flow rate and air pressure rise necessary to force cooling air over selected areas of the engine.

35. (*New*) The generator of Claim 34, wherein the inner portion is made from lightweight material.

36 (*New*) The generator of Claim 34, wherein the unitary flywheel-alternator fan assembly is the sole component driven by the engine.

37. (*New*) The generator of Claim 34, wherein the magnetic material is steel.

38. (*New*) The generator of Claim 34, wherein the flywheel is comprised of Samarium cobalt magnets, steel, and an aluminum alloy.

39. (*New*) The generator of Claim 34, wherein the flywheel is comprised of Neodymium-iron-boron magnets, steel, and an aluminum alloy.

40. (*New*) The generator of Claim 34, wherein the flywheel is comprised of Samarium cobalt magnets, steel and a magnesium alloy.

41. (*New*) The generator of Claim 34, wherein the flywheel is comprised of Neodymium-iron-boron magnets, steel, and a magnesium alloy.

42. (*New*) The generator of Claim 34, wherein the selected engine areas comprise at least one of an oil reservoir, electronics, cylinder head, and engine block.

43. (*New*) The generator of Claim 34, wherein the engine is an internal combustion engine.

44. (*New*) The generator of Claim 34, wherein the cooling fan is selected from the group consisting of a centrifugal fan, an axial fan and a mixed-flow fan.

45. (*New*) The generator of Claim 44, wherein an engine cowling is provided to function as at least two of a fan shroud, a fan scroll, a distributor to cool the engine and alternator, an electronic cold plate and one or more coolant ducts.

46. (*New*) The generator of Claim 45, wherein the distributor function of the engine cowling separates air flow to cool at least two of an engine head, cylinder wall of the engine, oil sump and electronics.

47. (*New*) The generator of Claim 45, wherein a fan shroud for the cooling fan is operatively associated with the engine cooling to force air through the engine cowling.

48. (*New*) The generator of Claim 34, wherein the cooling fan provides a mechanical link between an inertia component and a mounting portion of the flywheel.

49. (*New*) The generator of Claim 48, wherein a lightweight alloy in the cooling fan constitutes the mechanical link and magnetic materials of the alternator's rotor provides the inertia component.

50. (*New*) The generator of Claim 34, wherein the alternator is a permanent magnet alternator.

51. (*New*) The flywheel of Claim 34, wherein the alternator rotor, inertial material and fan or blower constitute a three-piece construction of lightweight material, magnetic material, and magnets.

52. (*New*) The generator of Claim 51, wherein the lightweight alloy is one of magnesium or an aluminum alloy.

53. (*New*) The generator of Claim 50, wherein the alternator is a radial gap, twelve-pole alternator.

54. (*New*) The generator of Claim 34, wherein means is provided for converting alternating current produced by the alternator into direct current.

55. (*New*) The generator of Claim 54, wherein the converting means comprises rectifiers.

56. (*New*) The generator of Claim 54, wherein an engine cowling is provided to function as at least two of a fan shroud, a fan scroll, a distributor to cool the engine and the alternator, an electronic cold plate and one or more coolant ducts.

57. (*New*) The generator of Claim 56, wherein the distributor function of the engine cowling separates air flow to cool at least two of an engine head, cylinder wall of the engine, electrical components, and an oil sump.

58. (*New*) The generator of Claim 51, wherein at least one coolant duct is associated with the oil sump which includes fins in the duct channel to enhance cooling.

59. (*New*) The generator of Claim 54, wherein the converting means is arranged at the engine cowling.

60. (*New*) The generator of Claim 54, wherein the alternator is configured to produce three-phase power in parallel circuits.

61. (*New*) The generator of Claim 60, wherein the converting means comprise full-wave rectifiers.

62. (*New*) The generator of Claim 61, wherein an engine cowling is provided to function as at least two of a fan shroud, a fan scroll, a distributor to cool the engine and the alternator, an electronic cold plate and one or more coolant ducts.

63. (*New*) The generator of Claim 62, wherein the converting means is arranged at the engine cowling.

64. (*New*) The generator of Claim 34, wherein a backpack mounting is provided for the engine and alternator.

65. (*New*) The generator of Claim 64, wherein the engine and alternator are configured to produce a power output of up to about 5 kW.

66. (*New*) The generator of Claim 34, wherein a rollcage mounting is provided for the engine and alternator.

67. (*New*) The generator of Claim 66, wherein the engine and alternator are configured to produce a power output of up to about 15 kW.